

forming a cavity in said dielectric layer;

onto said first surface depositing a layer of copper, whereby said cavity becomes overfilled with copper;

polishing said copper layer with a slurry that comprises a suspension of abrasive particles in deionized water, hydrogen peroxide, and TMAH until said cavity is just filled with copper, having a second surface, and there is no copper on said first surface; and

rinsing said copper layer in deionized water whereby there is no oxide layer on said second surface and all of said abrasive ~~partiele~~ particles have been removed.

Claim 28 (original): The process described in claim 27 wherein the TMAH has a concentration in said slurry of between about 2% and 20%.

Claim 29 (currently amended): A process for performing CMP, comprising:

providing a dielectric layer having a first surface;

forming a cavity in said dielectric layer;

onto said first surface depositing a layer of copper, whereby said cavity becomes overfilled with copper;

polishing said copper layer with a slurry that comprises a suspension of abrasive particles in deionized water, hydrogen peroxide, and TBAH until said cavity is just filled with copper, having a second surface, and there is no copper on said first surface; and

rinsing said copper layer in deionized water whereby there is no oxide layer on said second surface and all of said abrasive ~~partiele~~ particles have been removed.

Claim 30 (original): The process described in claim 29 wherein the TBAH has a concentration in said slurry of between about 2% and 20%.